Universidad de Castilla-La Mancha

DESTINOS DE PRÁCTICAS OFERTADOS Y FORMULARIO DE PARTICIPACIÓN EN DESTINOS PRÁCTICAS ASOCIACIONES DE CIENTÍFICOS ESPAÑOLES 2025

Formulario de participación en destinos prácticas asociaciones de científicos españoles 2025 a través del siguiente enlace:

https://forms.office.com/e/1s078Adctg

DESTINOS DE PRÁCTICAS OFERTADOS

* Destinos CERFA con ayuda económica complementaria en concepto de viaje (500 euros) a través del siguiente enlace: https://cerfa.de/ayudas-traineeship-cerfa/

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Department of Ophthalmology. University Hospital Essen.

TIPO DE ORGANIZACIÓN Organization type EPLUS-RES

ORGANISMO PUBLICO Public Body ☑ SI Yes ☐ NO

SIN ANIMO DE LUCRO Non-Profit ☑ SI Yes ☐ NO

TAMAÑO Size > 250 employees

WEB https://augenklinik.uk-essen.de/ag

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS
¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes, availability to evaluate ECTS credit validation reports but it is not a priority

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

01/06/2025 - 30/09/2025

FLEXIBILIDAD DE FECHAS
Flexibility in dates

☐ SI yes
☐ NO

TÍTULO DEL PROYECTO Project title Targeted combinations of drugs in cancer cells

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

37,5

PROGRAMA Detailed programme of the traineeship

The research group of Translational Genomics utilizes a multifaceted approach that integrates genomics and bioinformatics to elucidate the mechanisms underlying tumor development and metastasis in renal cell carcinoma and uveal melanoma. This approach involves the validation of findings using molecular biology and biochemistry methods, as well as preclinical models, such as patient-derived organoids. The ultimate objective of this research is to translate the findings into clinical applications. Renal cell carcinoma and uveal melanoma are distinguished by recurrent mutations in the epigenetic modifier and tumor suppressor gene BAP1, which contribute to elevated tumor aggression, augmented metastasis, and diminished patient survival. We have identified several vulnerabilities of tumors with BAP1 loss and aim to perform targeted drug combination screens in several cell lines of different cancer entities and patient-derived organoids generated from tumors of renal cell carcinoma and uveal melanoma, obtained in collaboration with surgeons and pathologists in the departments of Urology and Ophthalmology at the University Hospital Essen.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

Cell culture of mammalian cell lines and patient-derived organoids, cell viability and proliferation (CellTiter-Glo luminescent assay) , drug treatment, high throughput screening, synergism analysis, cancer genomics, experimental design and data interpretation

MONITORIZACION Monitoring plan

Daily direct supervision of the trainee until sufficient capacity and independence is achieved to work with minimal supervision. Regular meetings thereafter, at least weekly and as needed, to discuss data analysis, interpretation and problem solving.

EVALUACIÓN Evaluation plan

Evaluation of the trainee's progress towards the project's goals through weekly meetings and a final evaluation of the entire project.

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

Students will benefit from the “Ayudas Traineeship CERFA” consisting of 500 EUR and a career development course.

OTRA INFORMACIÓN RELEVANTE Other relevant information

Students will benefit from the “Ayudas Traineeship CERFA” consisting of 500 EUR and a career development course.

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biochemistry, Pharmacy, Biotechnology, Informatics

NIVEL DE ESTUDIO Level of studies

Superior

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Basic laboratory experience is required/desirable.

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS Language and minimum level recommended for internships

English B2

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

Enrolment as intern at University Hospital Essen and lab member in the laboratory of Translational Genomics

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Psycho- Neurolinguistics Chair. Institute for Linguistics. Heinrich Heine University Düsseldorf

TIPO DE ORGANIZACIÓN Organization type EPLUS-EDU-HEI

ORGANISMO PUBLICO Public Body ☑ SI Yes ☐ NO

SIN ANIMO DE LUCRO Non-Profit ☑ SI Yes ☐ NO

TAMAÑO Size > 250 employees

WEB

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS
¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes, availability to evaluate ECTS credit validation reports but it is not a priority

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

01/05/2025 - 31/11/2025

FLEXIBILIDAD DE FECHAS
Flexibility in dates

☐ SI yes
☐ NO

TÍTULO DEL PROYECTO Project title

Proyecto ALHEA: Atrición del Lenguaje de Hablantes de Español en Alemania I

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

35

PROGRAMA Detailed programme of the traineeship

Project ALHEA stays for the Spanish “Atrición del lenguaje de Hablantes de Español en Alemania” (Language attrition of Spanish Speakers in Germany). The project investigates the effect that living on a third language (L3) has for the mother tongue/native language (L1) and the second language (L2).
In order to do so, a large group of Spanish speakers living and working in Germany is being tested at the moment. When the student arrive, the data will be available already for at least 50 participants.
The student will have the possibility to learn how the study was designed, how an acquisition with human participants is made, and last but not least will have access and be expected to analyse part of the available data. More information about the project and the current state can be seen here: https://www.ling.hhu.de/en/departments/linguistik-iv-psycho-und-neurolinguistik/villar-gonzalez/project-alhea
Depending on the preferences of the student and the dates where they will arrive, it will be possible to actively participate on the creation and analysis of a small corpus based on a retelling exercise, and in at least one of the other sections of the project:

- Network analysis of lexico-semantic data
- Network analysis of phonetics-phonological data
- Linguistics factors and features affected by language attrition

It is expected that the student will be present at least 3 days per week at the University, and at least one working from home. The 35 hours per week will be split:
4 h organizational & administrative duties
2h weekly meetings
20h corpus project
4h self reading/learning
5h other preferred project
If the student arrives in the lecturing time (until mid July), the student will have the opportunity to assist to talks, and to the seminars related to the project.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

The student will learn theory about language attrition and general linguistics (L1, L2, Mothertongue, Heritage language…). How a study is organized and how data is acquired from human participants. Furthermore, the student will be involved on the analysis part of the project and be able to propose different analysis of the current data and the future steps of the project (including brain data).
It is preferred that the student is in July in Düsseldorf so it will be able to assist to some of the seminars and interact with the students at the HHU.

MONITORIZACION Monitoring plan

The student will have weekly meetings where they will present the work from the previous week and will show the expected plan for the current week. In the last three weeks, the student will present a general overview about their achievements and proposing future steps proposed for the project/analysis. Before leaving, the draft for the final document about the internship will be handed. The possibility of presenting this in person or online during a seminar about Language Attrition will be offered to the student.

EVALUACIÓN Evaluation plan

It is expected that at the end of the internship the student will be able to:

Understand and explain what is language attrition, why is this important and how to research it.

Understand and explain the content of the project and the available results
Understand the challenges and opportunities of making research with human participants
Become a part of the project and explain the personal contribution to the project
Participate on the life at the HHU in general, and at the Institute in particular
Propose future and/or further research and analysis options for the project

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

Students will benefit from the “Ayudas Traineeship CERFA” consisting of 500 EUR and a career development course.

OTRA INFORMACIÓN RELEVANTE Other relevant information

Students will benefit from the “Ayudas Traineeship CERFA” consisting of 500 EUR and a career development course.

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Computer Engineering/Computational Science, Computational Linguistics/Linguistics, Investigación en Letras y Humanidades/ Philology, Modern languages, Psychology

NIVEL DE ESTUDIO Level of studies

Master's level

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Able to critically read and analyse scientific papers
Preferred: experience with linguistics corpus and/or computer programming
Expected: interest in the topic and willing to learn and read

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

English B2 and Spanish (at least C1, preferred a native speaker) is needed for analysing the data.

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Psycho- Neurolinguistics Chair. Institute for Linguistics. Heinrich Heine University Düsseldorf

TIPO DE ORGANIZACIÓN Organization type EPLUS-EDU-HEI

ORGANISMO PUBLICO Public Body ☐ SI Yes ☐ NO

SIN ANIMO DE LUCRO Non-Profit ☐ SI Yes ☐ NO

TAMAÑO Size > 250 employees

WEB

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS
¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes, availability to evaluate ECTS credit validation reports but it is not a priority

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

01/05/2025 - 31/11/2025

FLEXIBILIDAD DE FECHAS
Flexibility in dates

☐ SI yes
☐ NO

TÍTULO DEL PROYECTO Project title Proyecto ALHEA: Atrición del Lenguaje de Hablantes de Español en Alemania II

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

35

PROGRAMA Detailed programme of the traineeship

Project ALHEA stays for the Spanish “Atrición del lenguaje de Hablantes de Español en Alemania” (Language attrition of Spanish Speakers in Germany). The project investigates the effect that living on a third language (L3) has for the mother tongue/native language (L1) and the second language (L2).
In order to do so, a large group of Spanish speakers living and working in Germany is being tested at the moment. When the student arrive, the data will be available already for at least 50 participants.
The student will have the possibility to learn how the study was designed, how an acquisition with human participants is made, and last but not least will have access and be expected to analyse part of the available data. More information about the project and the current state can be seen here: https://www.ling.hhu.de/en/departments/linguistik-iv-psycho-und-neurolinguistik/villar-gonzalez/project-alhea
Depending on the preferences of the student and the dates where they will arrive, it will be possible to actively participate on the creation and analysis of a small corpus based on a retelling exercise, and in at least one of the other sections of the project:

- Extra-Linguistics factors: Age, Attitude, Motivation, formal education, …

It is expected that the student will be present at least 3 days per week at the University, and at least one working from home. The 35 hours per week will be split:
4 h organizational & administrative duties
2h weekly meetings
15h corpus project
4h self reading/learning
10h extralinguistic factors analysis (and organization of the data)
If the student arrives in the lecturing time (until mid July), the student will have the opportunity to assist to talks, and to the seminars related to the project.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

The student will learn theory about language attrition and general linguistics (L1, L2, Mothertongue, Heritage language…). Furthermore, how to format and integrate extralinguistic factors in the empirical analysis is a challenge that includes work at the same time with quantitative and qualitative data. Moreover, the student will be involved on the analysis part of the project and be able to propose different analysis of the current data and the future steps of the project (including brain data).

MONITORIZACION Monitoring plan

The student will have weekly meetings where they will present the work from the previous week and will show the expected plan for the current week. In the last three weeks, the student will present a general overview about their achievements and proposing future steps for the project/analysis. Before leaving, the draft for the final document about the internship will be handed. The possibility of presenting this in person or online during a seminar about Language Attrition will be offered to the student.

EVALUACIÓN Evaluation plan

It is expected that at the end of the internship the student will be able to:
Understand and explain what is language attrition, why is this important and how to research it.

Understand and explain the content of the project and the available results
Understand the challenges and opportunities of making research with human participants
Understand the importance of mixing methods: qualitative and quantitative analysis of data
Become a part of the project and explain the personal contribution to the project
Participate on the life at the HHU in general, and at the Institute in particular
Propose future and/or further research and analysis options for the project

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

Students will benefit from the “Ayudas Traineeship CERFA” consisting of 500 EUR and a career development course.

OTRA INFORMACIÓN RELEVANTE Other relevant information

Students will benefit from the “Ayudas Traineeship CERFA” consisting of 500 EUR and a career development course.

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Investigación en Letras y Humanidades/ Philology, Psychology, Computational Linguistics/ Linguistics, Computer Engineering/Computational Science/Informatics, Modern languages

NIVEL DE ESTUDIO Level of studies

Master's level

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Able to critically read and analyse scientific papers
Preferred: experience with linguistics corpus and/or qualitative data
Expected: interest in the topic and willing to learn and read

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

English B2 (it is needed in order to interact with the rest of the team and people at the Institute) and Spanish (at least C1, preferred a native speaker) is needed for analysing the data.

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Department of Ophthalmology. University Hospital Essen.

Department of Plant Developmental Biology. Max Planck Institute for Plant Breeding Research

TIPO DE ORGANIZACIÓN Organization type EPLUS-RES

ORGANISMO PUBLICO Public Body ☐ SI Yes ☐ NO

SIN ANIMO DE LUCRO Non-Profit ☐ SI Yes ☐ NO

TAMAÑO Size > 250 employees

WEB https://www.mpipz.mpg.de/en

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS
¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes, availability to evaluate ECTS credit validation reports but it is not a priority

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

01/06/2025 - 01/10/2025

FLEXIBILIDAD DE FECHAS
Flexibility in dates

☐ SI yes
☐ NO

TÍTULO DEL PROYECTO Project title

Investigating the Role of Light in the Morphological Alterations in the Shoot Apical Meristem during Flowering.

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

38

PROGRAMA Detailed programme of the traineeship

The life cycle of flowering plants includes a major developmental change known as floral transition, which occurs in response to endogenous signals or environmental variables. During this transition, the shoot apical meristem (SAM), which contains a stem-cell niche, transitions from a vegetative meristem that generates leaves to an inflorescence meristem that initiates flowers. This identity change is accompanied by substantial morphological alterations, which transform the SAM from a small, flat structure to a larger, domed one. An increase in SAM size at floral transition is proposed to allow more properly spaced flowers to be formed in the inflorescence, but the mechanisms underlying SAM doming remain poorly understood.
We have developed a pipeline in MATLAB to quantitatively describe this morphological change and we are currently studying the effect of different genes involved in the transition timing, such as AP2, SOC1 or FUL, over the morphological change. But, thanks to work of Martina Cerise we also have a huge dataset of confocal images describing the effect of the hours of light over the flower transition. As part of this traineeship programme, the intern will characterize this dataset using the pipelines already developed in the group to study the effect that a transition from short-day condition (8h in light and 16 in darkness) to long-day conditions (16h light and 8 in darkness). First the analysis will be done at the tissue level through a parabolic fitting of the meristem aerial outline. But then, depending on the project advance, we will optimize the cell segmentation pipeline, already developed in the group, to analyse the SAM architecture also at the single cell level. Additionally, and only if the time allows, we would try to model the interplay between the current genetic knowledge together with the new light dependent effects.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

The MPIPZ is one of the most important institutes for plant science research worldwide, offering opportunities for students to improve their scientific skills. The student will have access to a high-performance computer for analysis and will be able to experience all the stages in the analysis of confocal images to develop a broad knowledge in image analysis. Additionally, this internship offers the opportunity of daily experience in a truly interdisciplinary research environment, working with one of the group's postdocs, allowing him/her to develop a broad knowledge in both image analysis and plant biology and the latest cutting-edge software.

MONITORIZACION Monitoring plan

The trainee will work closely with one of the postdocs from the group. The monitoring plan will be structured through weekly informal meetings to define short-term goals. The student will participate in group meetings (as an audience member and speaker) and department meetings where results will be discussed to enhance understanding of the scientific process. The supervisor at the sending institution will provide suggestions as needed.

EVALUACIÓN Evaluation plan

The progress of the trainee will be evaluated daily by the supervisor but also by different members of the group. In addition, individual meetings will be arranged at the beginning of the internship and monthly to define the plan, the short-term goals, and the progress of the project. Finally, the trainee will have the opportunity to participate in group, sub-group and departmental meetings to facilitate the writing of a final report or prepare a presentation with the methodologies employed during the traineeship and the results obtained.

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

Students will benefit from the “Ayudas Traineeship CERFA” consisting of 500 EUR and a career development course.

Moreover, the Institution will provide 700 EUR support to the student.

OTRA INFORMACIÓN RELEVANTE Other relevant information

Students will benefit from the “Ayudas Traineeship CERFA” consisting of 500 EUR and a career development course.

Moreover, the Institution will provide 700 EUR support to the student.

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Computer Engineering, Biotechnology, Informatics

NIVEL DE ESTUDIO Level of studies

Bachelor or Master student

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Basic knowledge in computational analysis/programming. Biology experience its a plus.

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

English B2

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Faculty of Medicine, Institut de Recherche Interdisciplinaire en Biologie Humaine et Moléculaire (IRIBHM), Université Libre de Bruxelles (ULB)

TIPO DE ORGANIZACIÓN Organization type

EPLUS-EDU-HEI

ORGANISMO PUBLICO Public Body [X] SI Yes [ ] NO

NO SIN ANIMO DE LUCRO Non-Profit [X] SI Yes [ ] NO

TAMAÑO Size +250

WEB https://iribhm.org/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS ¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

No

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

The candidate will have flexibility at the time of start and finish the stay. Ideally, 4-6 months would be preferred, but I am open for shorter stays depending the availability of the candidate

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[ ] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title

Unraveling resilience to protein folding stress across early mammalian

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

35

PROGRAMA Detailed programme of the traineeship

Embryonic development relies on genome and proteome stability in all species. Despite the robustness of the developmental programme, embryo fitness is continuously threatened by de novo acquisition of metabolic, proteostatic and genomic alterations in cells. While resilience to stress has been studied in several model organisms (including C. Elegans, D. Melanogaster or D. Renio), it remains unexplored in mammals, and particularly in humans, in which spontaneous miscarriage is frequent (>70%) during the first weeks of gestation.

Physiological protein turnover is lineage-specific, as the response to genotoxic stress (recently discovered by our group; De Jaime-Soguero et al. NatComms 2024). Starting from this premise, the trainee will study how early mammalian lineages (corresponding to pre and early post-implantation stages) mitigate microenvironmental protein folding stress, including heat- shock and endoplasmic reticulum stress responses. With this purpose, the trainee will work with mouse embryonic stem cells (mESCs), which can differentiate in 2D into the three embryonic germ layers (ectoderm, mesoderm, endoderm). Furthermore, the candidate will be trained in generating 3D stem cell-based embryo models that recapitulate the embryonic architecture in a dish. This includes models for early post-implantation development (EiTiX embryoids) or gastrulation (gastruloids). Taking together these models, the trainee will quantify: i) the protein folding stress levels by classical biochemistry and microscopy techniques in different lineages after induction or absence of the ER stress response (e.g. by tunicamycin) or temperature stress (e.g. increase of temperature in culture); and ii) the survival and adaptation of the cells to those stresses (apoptosis, autophagy, etc).

Overall, this work will shed light on unidentified developmental bottlenecks created in early embryo development by proteostasis alterations driven by the microenvironment, which could be associated with the high frequency of spontaneous human miscarriage.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

Mouse embryonic stem cell culture
- Differentiation protocols to the three germ layers (ectoderm, mesoderm, endoderm)
- Characterization of potency stages (pluripotency, lineage specification, etc) by immunofluorescence or qPCR analysis
- Generation of 3D stem cell-based embryo models (gastruloids and EiTiX embryoids) from mouse embryonic stem cells
- Static microscopy analysis of 2D and 3D models
- Protein quantification by Western Blot and immunofluorescence
- In silico analysis of protein folding signature by analyzing previous OMIC repositories
- Critical thinking capacity to decipher biological mechanisms driving cellular stress
- Writing and presentation skills in English
- Basic concepts in developmental biology (early mouse embryo development) and the applicability of stem cell models

MONITORIZACION Monitoring plan

The De Jaime-Soguero laboratory is a young and dynamic research group that kicked-off in October 2024. The trainee will be directly supervised and trained by myself, and would represent a unique opportunity to learn directly from a young PI. At arrival, the student will navigate the scientific literature of the topic, implement the in vitro techniques in cell culture and follow specific trainning (e.g. microscopy) during the first 1-1.5 month. After robustly reproduce the cellular and model pipelines, the trainee will perturbate proteostasis (as described in the project section) and quantify stress response using different approaches.

EVALUACIÓN Evaluation plan

The candidate will be evaluated based on the practical and learning skills.
He/She will have to present the results to the laboratory at the end of the stay, and I will personally evaluate her presentation. Furthermore, the trainee will be involved in the regular lab meetings and journal club presentations of the lab.

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

- As a junior group leader, this is an invaluable opportunity to peer and train young Spanish researchers in my new lab. This is a great opportunity to kick off my laboratory and to have a student that can dynamize certain aspects of my research projects.
- Feedback on mentoring and training. I am eager to learn and improve the way I teach and mentor students, a process I have done during my previous PhD and postdoctoral stages.

OTRA INFORMACIÓN RELEVANTE Other relevant information

- The candidate will learn basic concepts of stem cell and developmental biology, and will be at the of a research line that has not been addressed yet.
- The candidate will gain independence at the time of planning, executing and analysing the support of the PI.
- The candidate will learn state-of-the-art technologies in the field of stem cell biology; particularly stem cell-based embryo models, which has been recognized as Nature Method of the Year 2023.

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biochemistry, Biology, Biomedical engineering

NIVEL DE ESTUDIO Level of studies

Bachelor student or Master student. Preferentially Master

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Essentially, none expertise is required but high motivation and willing to learn. However, previous experience in cell culture, stem cell biology, molecular biology and/or embryo development would help

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Inglés

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Department of Biology / Faculty of Science / University of Antwerp

TIPO DE ORGANIZACIÓN Organization type EPLUS-EDU-HEI

ORGANISMO PUBLICO Public Body [X] SI Yes [ ] NO

NO SIN ANIMO DE LUCRO Non-Profit [X] SI Yes [ ] NO

TAMAÑO Size +250

WEB

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS ¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

Any time from June 2025 to December 2025

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[X] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title

Growth-promoting endophytes in maize under drought stress conditions.

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

38

PROGRAMA Detailed programme of the traineeship

One of the main challenges following climate change is long, unpredictable periods of drought. In our search towards increased plant resilience against drought stress, we identified two leaf endophytic bacterial strains conferring such drought tolerance in maize. We also study a commercially available fungal strain, that is currently used to improve maize growth under drought stress in Brazil. In this project we aim to identify their mode of action (MoA) and elucidate the downstream signalling in the maize leaf. Concerning the bacterial strains, we plan to do experiments regarding the localisation of the endophytes in the maize leaf (by fluorescent labelling) and in-depth analyses such as a transcriptome analysis, metabolite and biochemical analyses, and enzyme activity measurements.

Concerning the fungal strain, a transcriptomics analysis of the maize leaf meristem has already been performed, so the aim is to compare transcriptomic changes in planta with the genomic capacity of the fungal strain and verify our then formed hypotheses through in-depth analyses such as mentioned above for the bacterial endophytes.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

- Plant growth analysis (with leaf length tracker), plasmid cloning and transformation, (fluorescence) microscopy and image analysis, laboratory skills including metabolite analyses and biochemical analyses, NGS data analysis and qPCR.
- Scientific presenting and writing.

MONITORIZACION Monitoring plan

- Daily supervision by PhD student.
- Weekly team meetings where progress is presented and discussed
- Weekly progress discussion with Professor and PhD student
- If needed for Spanish home institution, guidance in report writing.

EVALUACIÓN Evaluation plan

- Continuous evaluation
- Weekly progress
- If required, final report

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

- Trainee will contribute to ongoing PhD Project and resulting publications.

OTRA INFORMACIÓN RELEVANTE Other relevant information

Training in plant growth analysis, metabolite, biochemical and transcriptome analysis
Training in scientific research
Functioning in international laboratory setting

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biology

NIVEL DE ESTUDIO Level of studies

MSc

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Basic understanding of plant physiology; Basic laboratory skills; Basic mathematic and computer skills

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Inglés

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Department of Biology / Faculty of Science / University of Antwerp

TIPO DE ORGANIZACIÓN Organization type

EPLUS-EDU-HEI

ORGANISMO PUBLICO Public Body [X] SI Yes [ ] NO

NO SIN ANIMO DE LUCRO Non-Profit [X] SI Yes [ ] NO

TAMAÑO Size +250

WEB https://www.uantwerpen.be/en/research-groups/impres/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS ¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

Any time from June 2025 to December 2025

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[X] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title

Impact Of Climate Change-Induced Extreme Precipitation On Plant Growth

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

38

PROGRAMA Detailed programme of the traineeship

It Is Increasingly Clear That The Global Climate Shifts To More Extreme Precipitation Regimes (Prs) With Longer Alternating Wet And Dry Periods. In Recent Years, Such Conditions Had Great Impact On Crop Production And Ecosystem Performance. Despite Their Increasing Importance, The Effect Of More Extreme Prs On Plant Growth And Performance Is Rarely Investigated. Extreme Prs Are Novel Environmental Conditions To Which Plants Are Exposed And Yet We Do Not Understand How They Will Impact Growth And The Underlying Physiological And Molecular Processes.

We Will Perform A Systemic, Multi-Organisational Level Investigation On The Impact Of Extreme Prs On The Growth Of Maize Plants Exposed To A Range Of Realistic Extreme Prs. They Will Be Analysed At The Organism Level (Leaf Length, Biomass, Photosynthesis), At The Tissue/Cell Level (Cell Division And Expansion) And At The Molecular Level (Gene Expression, Metabolite Levels, Enzyme Activity). The Impres Laboratory Has All Expertise Available For Such Analyses.

More Info At: Https://Www.Uantwerpen.Be/En/Research-Groups/Impres/Education/Master-Individual-Projects/

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

- Plant growth analysis (with leaf length tracker), plasmid cloning and transformation, (fluorescence) microscopy and image analysis, laboratory skills including metabolite analyses and biochemical analyses, NGS data analysis and qPCR.
- Scientific presenting and writing.

MONITORIZACION Monitoring plan

- Daily supervision by PhD student.
- Weekly team meetings where progress is presented and discussed
- Weekly progress discussion with Professor and PhD student
- If needed for Spanish home institution, guidance in report writing.

EVALUACIÓN Evaluation plan

- Continuous evaluation
- Weekly progress
- If required, final report

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

- Trainee will contribute to ongoing PhD Project and resulting publications.

OTRA INFORMACIÓN RELEVANTE Other relevant information

Training in plant growth analysis, metabolite, biochemical and transcriptome analysis
Training in scientific research
Functioning in international laboratory setting

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biology

NIVEL DE ESTUDIO Level of studies

MSc

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Basic understanding of plant physiology; Basic laboratory skills; Basic mathematic and computer skills

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

B2 en Inglés

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Department of Biology / Faculty of Science / University of Antwerp

TIPO DE ORGANIZACIÓN Organization type

EPLUS-EDU-HEI

ORGANISMO PUBLICO Public Body [X] SI Yes [ ] NO

NO SIN ANIMO DE LUCRO Non-Profit [X] SI Yes [ ] NO

TAMAÑO Size

WEB https://www.uantwerpen.be/en/research-groups/impres/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS ¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

Any time from June 2025 to December 2025

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[ ] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title

The role of sugar supply and signalling to the growth zone in the regulation of maize leaf growth

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

38

PROGRAMA Detailed programme of the traineeship

- Determining the impact of altered sugar signals and supply on maize leaf growth at high temporal resolution using automatic imaging.

- Kinematic analysis of cell division and expansion, using fluorescence and DIC microscopy in combination with image analysis.

- Metabolite and biochemical analysis (e.g., sugars metabolism) at contrasting time points during the day/ night cycle.

- Transcriptome analysis, mRNA (next generation) sequencing and QRT-PCR at contrasting time points during the the day/ night cycle

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES Knowledge, skills and competences to be acquired by the end of the traineeship

- Plant growth analysis (with leaf length tracker), plasmid cloning and transformation, (fluorescence) microscopy and image analysis, laboratory skills including metabolite analyses and biochemical analyses, NGS data analysis and qPCR.
- Scientific presenting and writing.

MONITORIZACION Monitoring plan

- Daily supervision by PhD student.
- Weekly team meetings where progress is presented and discussed
- Weekly progress discussion with Professor and PhD student
- If needed for Spanish home institution, guidance in report writing.

EVALUACIÓN Evaluation plan

- Continuous evaluation
- Weekly progress
- If required, final report

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

- Trainee will contribute to ongoing PhD Project and resulting publications.

OTRA INFORMACIÓN RELEVANTE Other relevant information

Training in plant growth analysis, metabolite, biochemical and transcriptome analysis
Training in scientific research
Functioning in international laboratory setting

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biology

NIVEL DE ESTUDIO Level of studies

MSc

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Basic understanding of plant physiology; Basic laboratory skills; Basic mathematic and computer skills

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Inglés

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Department of Biology / Faculty of Science / University of Antwerp

TIPO DE ORGANIZACIÓN Organization type EPLUS-EDU-HEI

ORGANISMO PUBLICO Public Body [X] SI Yes [ ] NO

NO SIN ANIMO DE LUCRO Non-Profit [X] SI Yes [ ] NO

TAMAÑO Size +250

WEB https://www.uantwerpen.be/en/research-groups/impres/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS ¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

Any time from June 2025 to December 2025

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[ ] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title

Chilling Stress Responses In The Maize Leaf Growth Zone

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

38

PROGRAMA Detailed programme of the traineeship

- Background: Chilling stress, temperatures between 0 and 15°C, negatively affects maize (Zea mays) yield in North-Western Europe. In contrast to the direct response to cold, the recovery from chilling stress has hardly been studied. We addressed this lack of knowledge by performing an integrated study of chilling recovery in the maize leaf growth zone. By a kinematic and genome-wide transcriptome analysis, we identified the phytohormone jasmonic acid (JA) and the enzymatic antioxidant peroxidase (POD) as potential key regulators of recovery from cold.

Objectives: The objective of this project aims (1) Pioneer a novel, high-resolution leaf growth analysis using automatic leaf length tracking for studying stress recovery of mutants, (2) Characterize the role of jasmonic acid and peroxidase in cold recovery at the cellular level by kinematic analysis and at the metabolite level by series of biochemical experiments (3) Unravel the molecular mechanisms downstream of JA and POD guiding the recovery response by transcriptomic analysis.

Methods:
- Leaf growth analysis: using a ruler and/or the Leaf Length tracker

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

- Plant growth analysis
- Microscopy and image analysis
- Laboratory skills including biochemical analysis, RNA extraction for NGS data analysis
- and qRT-PCR.
- Statistical analysis and interpretation of the results
- Scientific presenting and/or writing.

MONITORIZACION Monitoring plan

- Daily supervision by PhD student.
- Weekly team meetings where progress is presented and discussed
- Weekly progress discussion with Professor and PhD student
- If needed for Spanish home institution, guidance in report writing.

EVALUACIÓN Evaluation plan

- Continuous evaluation
- Weekly progress
- If required, final report

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

- Trainee will contribute to ongoing PhD Project and resulting publications.

OTRA INFORMACIÓN RELEVANTE Other relevant information

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biology

NIVEL DE ESTUDIO Level of studies

MSc

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Basic understanding of plant physiology; Basic laboratory skills; Basic mathematic and computer skills

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Inglés

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Department of Bioscience engineering. Faculty of Sciences. University of Antwerp

TIPO DE ORGANIZACIÓN Organization type EPLUS-EDU-HEI

ORGANISMO PUBLICO Public Body [X] SI Yes [ ] NO

NO SIN ANIMO DE LUCRO Non-Profit [X] SI Yes [ ] NO

TAMAÑO Size +250

WEB https://www.uantwerpen.be/en/research-groups/sustainable-energy/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS ¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

This period is flexible and can be adapted to fit your schedule. A minimum of 3 months is preferred.

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[X] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title

Resource-efficient treatment of cow urine with partial nitritation/ anammox in a rotating biological contactor

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

38

PROGRAMA Detailed programme of the traineeship

Agricultural practices and intensive livestock farming put immense pressure on the ecosystem by excessively leaching nutrients into it. Especially the excrements of livestock need to be managed well. While pigs can be kept inside a stable, (milk) cows generally roam free, which makes management of the nutrients they discharge challenging. Hanskamp, a Dutch agricultural technology company developed the 'cowtoilet' which stimulates the cow's bladder when it's being milked to release urine. This way, pure urine can be source-separated from the manure and appropriate treated or the nutrients recovered. However, research on cow urine treatment is limited.

The goal of this project is to achieve high nitrogen removal from cow urine. A potential way of treating these streams is by converting the nitrogen to nitrogen gas with partial nitritation/anammox (PN/A). This thesis will investigate the use of a low-tech reactor with passive aeration, such as a rotating biological contactor (RBC), which enables robust and resource-efficient treatment. The aims are to target high removal efficiencies and removal rates, while maintaining a stable operation.

First, the trainee will be instructed in laboratory basic skills that will be evaluated through an internal exam. Second, the trainee will be introduced to the reactors operation and all the practical activities inside and outside the laboratory related to the process. Eventually, the trainee will be the main responsible for the operation activities and the report of outliers, incongruent data, or evolution of the process.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

The trainee will be part of an international research team full of experts in different topics that will allow him/her to develop a collaborative working capacity, oral communication skills and several opportunities to present their work and receive feedback from experts.
By participating in weekly meetings, the Nitrogen cluster, and other academic activities, the the trainee will gain state-of-the-art knowledge in nitrogen management technologies, reactor operation, and systemic analysis of N-related problematics.
By working in the laboratory, the trainee will receive specific training about basic laboratory equipment management, N-species analysis, microbial community assessment, and data analysis.
In general, this is a great opportunity to improve the competencies related to the academical field.

MONITORIZACION Monitoring plan

There will be daily supervision by the tutor and/or lab technician to monitor the student's general motivation, progress and achievements. There are weekly meetings with the tutor, as well as biweekly meetings with the nitrogen cluster (group of researchers working on nitrogen removal related topics).

EVALUACIÓN Evaluation plan

- Laboratory rules test (2 weeks after initiating the practical activities)
- Permanent evaluation in the lab
- Final report and possible presentation at the end of the stay

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

The student will support the research project, collaborating with scientific production in both lab work and participating in meetings and discussions. In addition, our groups are willing to keep an international atmosphere in the lab, where the exchange of cultures enrich all of us in both professional and personal ways.

Vaccination certificate of Hepatitis A & Tetanus. Signing labrules and risk analysis. Registry through MobilityOnline.

OTRA INFORMACIÓN RELEVANTE Other relevant information

The trainee will have a unique experience completely immersed in the academic field, as well as a development of practical experience in a biochemical laboratory, he/she will gain significant knowledge and skills in a very relevant topic. All of this in conjunction, may open opportunities in the industry or the academy in the future for the trainee.

Additionally, the trainee will benefit of the advantages of being part of a diverse and international team.

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biochemistry, Environmental Sciences, Chemical engineering

NIVEL DE ESTUDIO Level of studies

Last year of Bachellor or Master's in Science

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Bachelor of Science, Ms Office (Word, Excel, Powerpoint). Desirable: laboratory experience, knowledge about wastewater treatment

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Inglés

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Department of Bioscience engineering. Faculty of Sciences. University of Antwerp

TIPO DE ORGANIZACIÓN Organization type EPLUS-EDU-HEI

ORGANISMO PUBLICO Public Body [X] SI Yes [ ] NO

NO SIN ANIMO DE LUCRO Non-Profit [X] SI Yes [ ] NO

TAMAÑO Size +250

WEB https://www.uantwerpen.be/en/research-groups/sustain/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS ¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

The period of mobility will be discussed with the supervisor and the trainee. A period of minimum 3 months is preferred.

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[X] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title

PURPLEX: Microbial protein and pigment production for food applications using purple bacteria

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

38

PROGRAMA Detailed programme of the traineeship

The global demand for protein-rich products is projected to rise by 50% between 2000 and 2050. Conventional protein production methods are highly inefficient, resulting in significant nutrient losses throughout the fertilizer-to-food chain. An innovative alternative is microbial protein, which leverages microbial biomass—such as bacteria, yeast, and algae—as a sustainable protein source for food and animal feed. Among these, purple phototrophic bacteria (PPB) stand out as promising candidates. They can accumulate up to 60% of their biomass as protein and produce valuable carotenoid pigments, which offer antioxidant properties with potential health benefits.

PPB have the advantage of growing under versatile conditions, using organics or CO2 as carbon sources, H2 as electron source and light as energy source. They can contribute to a bio-circular economy future. This project will align closely with ongoing research in the lab, focusing on bioreactor control, optimization of microbial growth, kinetics studies, and techno-economic analysis to assess the feasibility of large-scale PPB applications.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

The internship will allow them to gain valuable experience in a **diverse and dynamic team**, giving the student a head start in their further career in academia or industry. After the traineeship, it is expected that the intern will be able to independently execute **batch experiments** to study **growth kinetics** of bacteria, as well as **biomass characterization**. The student will also have a basic understanding of **bioreactor building, operation and control.** Processing data, statistical analysis and communication core results through a scientific presentation are also crucial.

MONITORIZACION Monitoring plan

The student will be permanently supervised by the postdoc in the lab (Luis Diaz Allegue) and two PhD students (Naïm and Sara). This will allow monitoring the student's progress and achievements during their lab work.

EVALUACIÓN Evaluation plan

The student will be evaluated based on their general progress, lab attitude, motivation and acquired skills and result-oriented thinking. It is also expected from the trainee to present their obtained data in a presentation at the end of the traineeship. This presentation along with a scientific report will be used to evaluate the trainee.

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

The student will be an extra-help for our lab, collaborating with scientific production in both lab work and participating in meetings and discussions. In addition, our groups are willing to keep an international atmosphere in the lab, where the exchange of cultures enrich all of us in both professional and personal ways.

OTRA INFORMACIÓN RELEVANTE Other relevant information

The student will acquire expertise in several lab techniques, biological reactors, and industrial food wastewater treatments. Besides, the student will enjoy the experience of an international placement in an applied sciences lab, which will increase both their knowledge and career possibilities in a national or international organization. Also, the student will enjoy the welcoming live in the city of Antwerp.

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biology, Chemical engineering, Environmental engineering, Food science and technology

NIVEL DE ESTUDIO Level of studies

Last year of Bachellor or Master's in Science

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Laboratory experience and knowledge of basic handlings/analyses (pipetting, weighing, preparation of solutions, etc.) is required, together with basic Excel, Word and Powerpoint skills.

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Inglés

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Advanced Drug Delivery and Biomaterials (ADDB laboratory of the Louvain Drug. Research Institute (LDRI)

TIPO DE ORGANIZACIÓN Organization type

EPLUS-EDU-HEI

ORGANISMO PUBLICO Public Body [X] SI Yes [ ] NO

NO SIN ANIMO DE LUCRO Non-Profit [X] SI Yes [ ] NO

TAMAÑO Size +250

WEB https://uclouvain.be/en/researchinstitutes/ldri/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS ¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

Yes

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

from (02/06/2025) to (29/08/2025 or 30/09/2025)

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[X] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title

Mechanotransduction-based therapy for spinal cord regeneration and its

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

35

PROGRAMA Detailed programme of the traineeship

This project is contemplated in the scope of the European project Piezo4Spine, focused on the pivotal role of mechanotransduction in the physiopathology of the spinal cord. This project is intended to develop a therapy that modulate the mechanotransduction of neurons. However, inside the complexity of the spinal cord, immune reaction carried out by glial cells have high importance contributing to the generation of a hostile environment for the regeneration, partly due to mechanical stimuli of the surrounding. According to this, it is important to evaluate the impact of this therapy on the actuation of glial cells, to discover if the mechanotransduction of glial cells can be also modulated in a beneficial way for spinal cord regeneration.

Based on this purpose, we will work according to the following program: Isolation of glial cells from pups of rat and generation of primary cell cultures. The maintenance of the culture requires a continuous check of the culture and changes of medium at determined time points.

Study of the response of glial cells after the activation of a transmembrane mechanosensor. These experiments will simulate the mechanical stimuli that cells receive after a traumatic injury of the spinal cord. On one hand, this study will include the quantification of the expression of pro-inflammatory chemokines or markers by means of PCR, and on the other hand, the qualitative evaluation of the influx of calcium and the phenotype of cells by immunofluorescence. After clarifying how glial cells behave under the damaging scenario, next experiments will test the functionality of the developed therapy. This functionality will be evaluated not only under conditions of the mechanical stimulation, but also under inflammatory conditions that resemble the hostile context of the injured spinal cord. For this part, techniques such as western blot, immunofluorescence, PCR or calcium influx evaluation will be used.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

The student will acquire competences on cell isolation and preparation of primary cultures, which implies to work under sterility conditions and know the habits when working in a laboratory of cell culture. The student will learn to extract RNA from cells by precipitation with alcohols, quantify the RNA, do the retrotranscription into cDNA, perform quantitative PCRs and analyze the results. Another competence to be acquired is the realization of immunofluorescence from cell cultures and its visualization by microscopy. Finally, the student will learn how to do protein electrophoresis and western blot for the analysis of the expression of specific proteins.

MONITORIZACION Monitoring plan

At the beginning of the stay and first times performing the different techniques, the student will observe the protocols and experiments carried out by the supervisor.
After his/her familiarization, the student will begin performing experiments under supervision.
Then, when he/she gains confidence and the competence necessary, he/she will work independently, but still with periodic supervision and help in case that it is needed. The work carried out by the student will be monitored in weekly meetings to discuss the student's progress on tasks, discuss the results obtained, solve questions and plan the following steps

EVALUACIÓN Evaluation plan

Technical skills will be evaluated by regular observation to the student's performance, interactions in the laboratory and problem solving.

The student will be evaluated in terms of communication skills according to the ability to summarize and discuss the research findings and present them during the weekly meetings with the supervisor, or with other members of the group.

The supervisor will ask for feedback from other laboratory members regarding the student's contribution to the environment and organization of the laboratory.

The student will be asked for feedback about his/her well-being in the laboratory or specific aspects he/she would like to learn

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

The impacts and benefits of the traineeship for me as a supervisor include involving the student in the challenging European Piezo4Spine project, enhancing the project's progress with his/her support. As this project contemplate the evaluation of different aspects because it proposes a multifaceted therapy, the student will assist in evaluating one of the key aspects, while I can focus on others at the same time. This collaboration can also offer new perspectives and insights to the ongoing research, benefiting both the student and the project.

OTRA INFORMACIÓN RELEVANTE Other relevant information

The benefits for the trainee include the opportunity to participate actively in a very interesting European project, and even attend the periodic meetings with the rest of the partners. The student will gain hands-on experience in evaluating key aspects in the scope of spinal cord regeneration. He/she will develop or improve skills in experimental design, data analysis and scientific communication while contributing to cutting-edge research. Moreover, this traineeship will contribute to the professional and personal growth of the student, interactingwith people from different countries, broadening their cultural awareness and expanding his/her professional network

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biochemistry, Biology, Pharmacy

NIVEL DE ESTUDIO Level of studies

Last year of Bachellor or Master's in Science

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

heoretical knowledge about PCR, electrophoresis and immunofluorescence. Previous work experience in a laboratory or hands-on experience in cell culture are going to be valued.

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Inglés

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email | Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Institute of Basic Medical Science and Department of Immunology (Section for research), University of Oslo, Oslo University Hospital HF

TIPO DE ORGANIZACIÓN Organization type: University

ORGANISMO PUBLICO Public Body: [X] SI Yes [ ] NO

SIN ANIMO DE LUCRO Non-Profit: [x] SI Yes [ ] NO

TAMAÑO Size: Approximately 27700 students

WEB: https://www.uio.no/english/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS
¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

It is not a priority

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

From mid-August 2024 to May-June 2025

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[X] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title

Study of cross-talk between monocytes-derived macrophages and liver organoids under metabolic stress

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

37,5h

PROGRAMA Detailed programme of the traineeship (100-200 words)

Metabolic dysfunction-associated steatotic liver disease (MASLD) is the most prevalent chronic liver disease globally, and the prevalence is estimated to be 25% in the general population. The first stage of the disease is steatosis, characterized by lipid accumulation in more than 5% of the hepatocytes, and may progress through inflammation to non-alcoholic steatohepatitis (NASH), advance further to fibrosis, and finally, cirrhosis.
The liver has a substantial number of macrophages, playing a role in both tissue homeostasis and disease. This population consists of both embryo-derived resident macrophages, called Kupffer cells (KC), and monocyte-derived macrophages from the circulation. During disease progression, there is a shift in the macrophage population with an increase of monocyte-derived macrophages.
This project will be focused on the establishing co-culture between donor isogenic monocyte-derived macrophages and liver organoids. The impact of the cross-talk between monocytes-derived macrophages and hepatic progenitors and mature hepatocytes is underinvestigated.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

You will learn cell culture techniques 2D and 3D, adherent cell lines; molecular biology such as qPCR, cell growth, staining and viability assays. You will also study drug response in cells.
You will train transferrable skills such as presentations, writing and project planning. You will get to be part of an international research team with researchers at different stages of their careers, and frequent opportunities to get input on your data (weekly lab meetings). We have an ambitious environment where team members share their expertise to help each other improve their career prospects and intellectual enrichment.

MONITORIZACION Monitoring plan

You will be closely supervised by the project leader and the main supervisor based on progress and adjust the project plan if necessary.

EVALUACIÓN Evaluation plan

You will get input on your work from the supervisors and during the group lab meetings we arrange weekly.

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

NO

OTRA INFORMACIÓN RELEVANTE Other relevant information

NO

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biology, biotechnology, molecular science, biomedicine, medicine, pharmacy, lab engineer

NIVEL DE ESTUDIO Level of studies

Bachelor (undergraduate), graduate or master

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

It will be an advantage if the student has some skills in cell culture or molecular biology. Also if the student has knowledge in liver field.

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Language competence required: Good oral and written English skills.

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

NO

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email | Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Hybrid Technology Hub (HTH) Centre of Excellence, Institute of Basic Medical Science and Department of Immunology (Section for research), University of Oslo, Oslo University Hospital HF

TIPO DE ORGANIZACIÓN Organization type: Universidad publica

ORGANISMO PUBLICO Public Body: [X] SI Yes [ ] NO

SIN ANIMO DE LUCRO Non-Profit: [X] SI Yes [ ] NO

TAMAÑO Size: Approximately 27700 students

WEB: https://www.uio.no/english/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS
¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

It is not priority

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

From mid-August 2025 to May-June 2026 (min 4 months, take into account the ERASMUS grant)

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[X] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title: Development of a tumor-on-a-chip platform for testing new cancer therapeutic drugs

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

37.5h

PROGRAMA Detailed programme of the traineeship

Nowadays, clinical trials still confront the challenges associated with melanoma, a highly lethal human tumor that affects approximately 1,500 individuals annually in Norway. While immune therapy, particularly PD-1 checkpoint inhibitors, has shown promising results (effect in 30-40% of cases), significant problems still remain. With a focus on the PD-L1/PD-1 axis, where the interaction between cancer cells and immune cells is delayed allowing tumor evasion, we propose the integration of the tumor-on-chip (ToC) technology in the new therapeutic studies. This type of advanced in vitro platform will allow a more realistic simulation of tumor microenvironments, immune cell circulation, vascularization, and extracellular matrix interactions. This model has the potential to accelerate drug testing and improve the predictivity or translation power of preclinical studies.
This project aims to integrate an "immune competent" ToC melanoma, enabling the detailed dissection of interactions among the tumor, extracellular matrix, immune system, and vascularization. Subsequently, the platform will be used to evaluate therapeutic strategies in a melanoma metastatic model with 3D liver tissue representation as a metastatic target.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

The student will acquire skills in chemistry, lab techniques like pippeting, cell culture (cancer lines, 2D and 3D), cell/disease modeling, molecular biology (qPCR, cell viability assays and protein measurements), cell staining and microscopy. You will also learn and develop presentations, writing and project planning skills.

MONITORIZACION Monitoring plan

You will be closely followed by the main supervisor and the leader project as well as the other members of the same cancer line. The project plan will be adapted depending on the progress and results.

EVALUACIÓN Evaluation plan

You will get to be part of an international research team with researchers at different stages of their careers, and frequent opportunities to get input on your data (weekly lab meetings). We have an ambitious environment where team members share their expertise to help each other improve their career prospects and intellectual enrichment.

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

OTRA INFORMACIÓN RELEVANTE Other relevant information

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Investigacion basica, nanociencia y nanotecnologia molecular, biomedicina, biología, bioquímica, farmacia, medicina, biotecnologia

NIVEL DE ESTUDIO Level of studies

Estudiante de ultimo ano de grado o estudiantes de master

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Es una ventaja tener conocimientos sobre cultivo celular, técnicas de biología molecular, o cancer.

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Todo el trabajo, presentaciones e informes serán realizados en inglés, por lo que se espera/recomienda un buen nivel del mismo tanto oral como escrito (B2)

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email | Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Institute of Basic Medical Sciences, Medicine Faculty, University of Oslo

TIPO DE ORGANIZACIÓN Organization type: Academic/ University of Oslo

ORGANISMO PUBLICO Public Body: [x] SI Yes [ ] NO

SIN ANIMO DE LUCRO Non-Profit: [x] SI Yes [ ] NO

TAMAÑO Size: About 20 persons in our research group. More than 27000 students in the

WEB: https://www.med.uio.no/hth/english/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS
¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

It is not a priority

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

Mid August 2025 to Mid February 2026

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[x] SI yes
[ ] NO

TÍTULO DEL PROYECTO Project title: Gastruloids integration towards *in vitro* organ development

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

35 hrs /week

PROGRAMA Detailed programme of the traineeship

Background: Recent discoveries in stem cell and developmental biology have introduced a new era marked by the generation of *in vitro* models that recapitulate early mammalian development, providing unprecedented opportunities for extensive research in embryogenesis. Gastruloids[1], aggregates of defined numbers of embryonic stem cells (ESCs), develop derivatives of all germ layers with spatiotemporal patterns characteristic of embryos even though they lack clear brain structures[2]. Gastruloids have proven useful tools to explore the consequences of gastrulation in the absence of extraembryonic tissues, such as formation of cardiac primordia[3] or somite-like structures[4],[5], but no organogenesis to date.
Challenge: Focusing on human organ morphogenesis, our group aims at enabling gastruloids vascularisation. However, two main challenges appeared: (1) vascularisation of such a complex structure requires the presence of an extracellular support that could maintain both its integrity and further development; (2) gastruloids undergo epithelial to mesenchymal transition (EMT) and are therefore not expressing any outer epithelial-like layer necessary to maintain its organisation in case of contact with other tissues.
Project overview: Recently, an explosion of new research has significantly expanded our knowledge of early human trophoblast development. The project will aim at (1) generating differentiated and undifferentiated trophoblast organoid (TBO) already established in our laboratory [6,7] and co-culture with gastruloids and (2) testing different extracellular matrices (ECM) to embed the gastruloids issued from ESCs only or ESCs+TBO cells co-culture. Ultimately, the interesting structures produced will be included in an in-house microfluidic platform to test vascularisation.[8] The project will therefore give the opportunity to the student to gain knowledge and experience in both stem cell biology and microfluidics/organ-on-chip.

References:
[1] S.C. van den Brink, P. Baillie-Johnson, T. Balayo, A.-K. Hadjantonakis, S. Nowotschin, D.A. Turner, A. Martinez Arias, Symmetry breaking, germ layer specification and axial organisation in aggregates of mouse embryonic stem cells, Development. 141 (2014) 4231–4242. https://doi.org/10.1242/dev.113001.
[2] L. Beccari, N. Moris, M. Girgin, D.A. Turner, P. Baillie-Johnson, A.-C. Cossy, M.P. Lutolf, D. Duboule, A.M. Arias, Multi-axial self-organization properties of mouse embryonic stem cells into gastruloids, Nature. 562 (2018) 272–276. https://doi.org/10.1038/s41586-018-0578-0.
[3] G. Rossi, S. Giger, T. Hübscher, M.P. Lutolf, Gastruloids as in vitro models of embryonic blood development with spatial and temporal resolution, Sci Rep. 12 (2022) 13380. https://doi.org/10.1038/s41598-022-17265-1.
[4] J.V. Veenvliet, A. Bolondi, H. Kretzmer, L. Haut, M. Scholze-Wittler, D. Schifferl, F. Koch, L. Guignard, A.S. Kumar, M. Pustet, S. Heimann, R. Buschow, L. Wittler, B. Timmermann, A. Meissner, B.G. Herrmann, Mouse embryonic stem cells self-organize into trunk-like structures with neural tube and somites, Science. 370 (2020) eaba4937. https://doi.org/10.1126/science.aba4937.
[5] S.C. van den Brink, A. van Oudenaarden, 3D gastruloids: a novel frontier in stem cell-based in vitro modeling of mammalian gastrulation, Trends Cell Biol. 31 (2021) 747–759. https://doi.org/10.1016/j.tcb.2021.06.007.
[6] K.G.V. Anderson, W.B. Hamilton, F.V. Roske, A. Azad, T.E. Knudsen, M.A. Canham, L.M. Forrester, J.M. Brickman, Insulin fine-tunes self-renewal pathways governing naive pluripotency and extra-embryonic endoderm, Nat Cell Biol. 19 (2017) 1164–1177. https://doi.org/10.1038/ncb3617.
[7] M. Unneberg-Agerholm, Y.F. Wong, J.A. Romero Herrera, R.S. Monteiro, K.G.V. Anderson, J.M. Brickman, Naive human pluripotent stem cells respond to Wnt, Nodal and LIF signalling to produce expandable naive extra-embryonic endoderm, Development. 146 (2019) dev180620. https://doi.org/10.1242/dev.180620.
[8] M. Busek, A. Aizenshtadt, T. Koch, A. Frank, L. Delon, M. Amirola Martinez, A. Golovin, C. Dumas, J. Stokowiec, S. Gruenzner, E. Melum, S. Krauss, Pump-less, recirculating organ-on-a-chip (rOoC) platform, Lab on a Chip. (2023). https://doi.org/10.1039/D2LC00919F.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

Cell Biology
Embryo Development
Cell Culture (Cell line and Stem Cell)
Molecular Biology assays (ELISA, qPCR, IHC…)
Microfluidic device handling and preparation

MONITORIZACION Monitoring plan

You will be closely supervised by the project leader and the main supervisor based on progress and adjust the project plan if necessary.

EVALUACIÓN Evaluation plan

Presentations in weekly groups meetings (every week one presenter)
Writing reports

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

NA

OTRA INFORMACIÓN RELEVANTE Other relevant information

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biotechnology, Biomedical Engineering

NIVEL DE ESTUDIO Level of studies

Master Student

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

Cell culture, Working in a biochemistry lab

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

B1 or 2 in English

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email | Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Molecular cell biology department, Institute for Cancer Research, Oslo University Hospital (OUH)

TIPO DE ORGANIZACIÓN Organization type: Hospital

ORGANISMO PUBLICO Public Body: [X] SI Yes

SIN ANIMO DE LUCRO Non-Profit: [X] SI Yes

TAMAÑO Size: OUH has over 20.000 employees

WEB: https://www.ous-research.no/enserink/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS
¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

It is not a priority.

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

2025, except some weeks during the summer (July). This can be agreed with the student.

FLEXIBILIDAD DE FECHAS
Flexibility in dates

[X] SI yes

TÍTULO DEL PROYECTO Project title: Functional precision medicine in acute myeloid leukemia

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

37.5 hours per week

PROGRAMA Detailed programme of the traineeship

Our team is experienced in applying functional precision medicine techniques for cancer patients, including ex-vivo drug sensitivity screens in multi-well plates that allow to test the effectiveness of drug libraries on cancer-derived cell lines and primary cancer cells, as well as in healthy cells.

On a previous study in AML (acute myeloid leukaemia) we have identified a subset of drugs that can help us to predict the long-term patient survival of patients treated with standard chemotherapy for AML. We have created a drug library with this reduced subset of drugs plus some predictive drugs from other published studies. Additionally, the library will include targeted therapies that are being tested in clinical trials. The student will test the effect of these drugs in a collection of primary leukemia samples to confirm the results of the previous study and test if we can predict the effect of the targeted therapies in the patient based on the results in the ex-vivo screens.

The student will also be involved in the cancer cell biobanking for patient material, working with blood and bone marrow samples. The student will extract the mononuclear cancer cells from these samples and prepare them for storing in nitrogen tanks.

When required the student will run more detailed screens using other devices (for example, incucyte in vivo microscopy real time experiments) or molecular biology expriments (as western blots or PCRs) for validating our results.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

Techniques: Cell culture; blood primary cell isolation using density gradients; cells cryopreservation; handling of sample biobanks; cell viability assessment; use of high-throughput.

Transferrable skills: presenting data and results, writing, and project planning. Use of English as a working language.

We are an international team with helpful and enthusiastic members always willing to help each other with learning techniques or discussing data.

MONITORIZACION Monitoring plan

There will be close supervision from your main supervisor and the group leader. The project plan will be adapted depending on the progress and results.

EVALUACIÓN Evaluation plan

There are weekly group meetings that alternate seminars (one person from the team presents their project) and journal club (discussing interesting literature for the projects). We also have biweekly meetings centered around the latest results and discuss problems and ways to move forward. You will be included in all these activities, getting feedback and suggestions for your work. There will be constant support from your supervisor.

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

OTRA INFORMACIÓN RELEVANTE Other relevant information

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biology, Biotechnology, Biochemistry, Pharmacy, Chemistry, Medicine

NIVEL DE ESTUDIO Level of studies

Master student or undergraduate in the last year of study.

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

The student should have some experience with pipetting and with cell culture.

No required but it would be an advantage to be familiar with cancer research.

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

It is required to have good oral and written skills in English.

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Bioscience department, IBV institute, Oslo University

TIPO DE ORGANIZACIÓN Organization type: University

ORGANISMO PUBLICO Public Body: [x] SI Yes [ ] NO

SIN ANIMO DE LUCRO Non-Profit: [x] SI Yes [ ] NO

TAMAÑO Size: Approximately 27700 students

WEB: https://www.uio.no/english/

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS
¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

It is not a priority; however, this project can be equivalent to 25-30 ECTS

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period

2025 except July

FLEXIBILIDAD DE FECHAS
Flexibility in dates
Minimum 4 months

[ ] SI yes [ ] NO

TÍTULO DEL PROYECTO Project title: **Exploring METTL13 as a therapeutic target and biomarker for solid cancer**

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

37,5 hours per week

PROGRAMA Detailed programme of the traineeship (100-200 words approx)

In recent decades, cancer therapy outcomes have improved significantly. However, aggressive and metastatic cancers still demand the development of novel, more targeted therapeutics. To address this, researchers and clinicians must focus on identifying alternative therapeutic targets with the ultimate goal of advancing effective anticancer treatments.

A hallmark of cancer cells is their ability to grow uncontrollably, which requires extensive protein synthesis. While protein synthesis is tightly regulated in normal cells, it is often dysregulated in cancer. As a result, targeting key components of the protein translation machinery and related signaling pathways holds great promise for cancer therapy.

We have identified a novel methyltransferase enzyme, METTL13, which methylates and modulates a critical component of the protein synthesis machinery—the eukaryotic elongation factor 1α (eEF1A). METTL13 is essential for efficient tumor growth in lung and pancreatic cancer. Our project, funded by the Norwegian Cancer Society, aims to:
i) explore the potential of METTL13 as a therapeutic target and identify METTL13 inhibitors, and
ii) evaluate METTL13 as a biomarker in solid cancers

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship (100 words approx)

You will learn cell culture techniques, adherent cancer cell lines; molecular biology such as western blotting, cell growth, and viability assays. You will also learn in the field of protein methylation in cancer as well as experience in studies on drug response in cells.

You will train in transferrable skills such as presentations, writing, and project planning. You will get to be part of an international research team with researchers at different stages of their careers, frequent opportunities to get input on your data (weekly lab meetings), and to get updated on the most recent advances in our field of interest ("journal club" presentations). We have an ambitious environment where team members share their expertise to help each other improve their career prospects and intellectual enrichment.

MONITORIZACION Monitoring plan (50 woeds approx)

You will be closely supervised by the project leader and the main supervisor based on progress and adjust the project plan if necessary.

EVALUACIÓN Evaluation plan (50 words approx)

You will get input on your work from the supervisors and during the group lab meetings we arrange weekly. The work performed in this project can be equivalent to 25-30 ECTS.

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA Additional specifications of the host institution

OTRA INFORMACIÓN RELEVANTE Other relevant information

1. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

Biology, Biotechnology

NIVEL DE ESTUDIO Level of studies

Degree in Biochemist, Biotechnology or Pharmacy.

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

It will be alt will be an advantage if the student is familiar with the field of cancer.

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Language competence required: Good oral and written English skills.

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institut

CONVOCATORIA DE PRÁCTICAS INTERNACIONALES
CALL FOR INTERNATIONAL INTERNSHIP

1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email | Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Departament/Faculty/Institution

Flow Cytometry Core Technology. UCD Conway Institute. University College Dublin

TIPO DE ORGANIZACIÓN Organization type: University

ORGANISMO PUBLICO Public Body: [x] SI Yes [ ] NO

SIN ANIMO DE LUCRO Non-Profit: [x] SI Yes [ ] NO

TAMAÑO Size: 50,000

WEB: www.ucd.ie

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS
¿Es una prioridad para el supervisor que el estudiante valide los créditos?
Availability to evaluate ECTS credit validation reports
Is it a priority for the supervisor that the student validates ECTS credits?

No

2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO
Wished/approximate dates for the mobility period: 01 Sep 2025 – 30 June 2026

FLEXIBILIDAD DE FECHAS
Flexibility in dates: [x] SI yes [ ] NO

TÍTULO DEL PROYECTO Project title: Citometría de Flujo

NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

35

PROGRAMA Detailed programme of the traineeship

Training in the usage and maintenance of flow cytometers and cell sorters: The trainee will be trained on the usage of multiple instrumentation from different brands, characteristics and complexities. To do so, the trainee will work instrument set up, instrument optimization, data analysis and data interpretation for the multiple applications of the facility. Trainee will be involved in the project, protocol and data discussion and it´s expected, by the end of the training period will be able to provide expert advise to novel users.
In order to provide a deeper knowledge of the full process, trainee will be involved in different projects. The trainee will process, prepare and analysis samples of cell culture, tissue and/or whole blood. Participant will be fully involved in the optimization of the method, data analysis, data reanalysis and reporting.
By the end of the traineeship, the trainee will prepare a summary report and present her job.

CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES
Knowledge, skills and competences to be acquired by the end of the traineeship

The trainee will be familiar with the full cytometry technology and methodology, from sample collection, establishment of protocols, instrument optimization and maintenance, data acquisition, data analysis and reporting.
The trainee will be familiar with the full process of sample analysis by flow cytometry as will be highly exposed to multiple applications from several groups that are using the core facility, so he/she will increase communication and interpersonal skills.
The trainee will be working supervised, but must learn also to work alone, so it´s expected he/she will increase his/her capabilities of teamwork and self-supervision.
The trainee will be working with state-of-the-art instrumentation: the trainee might need to read, interpret, criticise, and take some responsibilities on board. Timing is crucial in these experiments, so the trainee will increase his/her ability to organise working plans and experiments.

MONITORIZACION Monitoring plan

The trainee will be working mostly of the time side by side with Dr. Blanco as well as users of the UCD Flow Cytometry Core Technology.

EVALUACIÓN Evaluation plan

It will be a continued evaluation process. The generation of good data and capabilities of reproducibility of certain patterns will be the best way to evaluate trainee's progression and knowledge.

ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA
Additional specifications of the host institution

Conocimientos (preferible a nivel de 3º o 4º curso) en Biología, Bioquímica, Biotecnología, Veterinaria, Medicina, Biología Marina/Ciencias del Mar

OTRA INFORMACIÓN RELEVANTE Other relevant information

N/A

3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requeriments

AREA/S DE ESTUDIO Research area/s

ej. Química, Bioquímica, Biología, Ingeniería Informática…

NIVEL DE ESTUDIO Level of studies

Sea lo más específico posible
Ej. Estudiante de 3º de Grado, Estudiante de Máster, Estudiante para realizar Trabajo Fin de Grado…

REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA
Student required expertise and technical knowledge:

No necesariamente.

IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS
Language and minimum level recommended for internships

Inglés básico para sobrevivir en Irlanda

REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA
Additional requirements set by the host institution

El estudiante debe estar asegurado